

PYTHON SENDING EMAIL USING SMTP

http://www.tutorialspoint.com/python/python_sending_email.htm

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Simple Mail Transfer Protocol (SMTP) is a protocol which handles sending e-mail and routing e-mail between mail servers.

Python provides **smtplib** module which defines an SMTP client session object that can be used to send mail to any Internet machine with an SMTP or ESMTP listener daemon.

Here is a simple syntax to create one SMTP object which can later be used to send an email:

```
import smtplib

smtpObj = smtplib.SMTP( [host [, port [, local_hostname]]] )
```

Here is the detail of the parameters:

- **host:** This is the host running your SMTP server. You can specify IP address of the host or a domain name like tutorialspoint.com. This is optional argument.
- **port:** If you are providing *host* argument then you need to specify a port where SMTP server is listening. Usually this port would be 25.
- **local_hostname:** If your SMTP server is running on your local machine then you can specify just *localhost* as of this option.

An SMTP object has an instance method called **sendmail**, which will typically be used to do the work of mailing a message. It takes three parameters:

- The *sender* - A string with the address of the sender.
- The *receivers* - A list of strings, one for each recipient.
- The *message* - A message as a string formatted as specified in the various RFCs.

Example:

Here is a simple way to send one email using Python script. Try it once:

```
#!/usr/bin/python

import smtplib

sender = 'from@fromdomain.com'
receivers = ['to@todomain.com']

message = """From: From Person <from@fromdomain.com>
To: To Person <to@todomain.com>
Subject: SMTP e-mail test

This is a test e-mail message.
"""

try:
    smtpObj = smtplib.SMTP('localhost')
    smtpObj.sendmail(sender, receivers, message)
    print "Successfully sent email"
except SMTPException:
    print "Error: unable to send email"
```

Here you have placed a basic e-mail in message, using a triple quote, taking care to format the headers correctly. An e-mail requires a **From**, **To**, and **Subject** header, separated from the body of the e-mail with a blank line.

To send the mail you use *smtplib* to connect to the SMTP server on the local machine and then use the *sendmail* method along with the message, the from address, and the destination address as parameters (even though the from and to addresses are within the e-mail itself, these aren't always used to route mail).

If you're not running an SMTP server on your local machine, you can use *smtplib* client to communicate with a remote SMTP server. Unless you're using a webmail service (such as Hotmail or Yahoo! Mail), your e-mail provider will have provided you with outgoing mail server details that you can supply them, as follows:

```
smtplib.SMTP('mail.your-domain.com', 25)
```

Sending an HTML email using Python:

When you send a text message using Python then all the content will be treated as simple text. Even if you will include HTML tags in a text message, it will be displayed as simple text and HTML tags will not be formatted according to HTML syntax. But Python provides option to send an HTML message as actual HTML message.

While sending an email message you can specify a Mime version, content type and character set to send an HTML email.

Example:

Following is the example to send HTML content as an email. Try it once:

```
#!/usr/bin/python

import smtplib

message = """From: From Person <from@fromdomain.com>
To: To Person <to@todomain.com>
MIME-Version: 1.0
Content-type: text/html
Subject: SMTP HTML e-mail test

This is an e-mail message to be sent in HTML format

<b>This is HTML message.</b>
<h1>This is headline.</h1>
"""

try:
    smtpObj = smtplib.SMTP('localhost')
    smtpObj.sendmail(sender, receivers, message)
    print "Successfully sent email"
except SMTPException:
    print "Error: unable to send email"
```

Sending Attachements as an e-mail:

To send an email with mixed content requires to set **Content-type** header to **multipart/mixed**. Then text and attachment sections can be specified within **boundaries**.

A boundary is started with two hyphens followed by a unique number which can not appear in the message part of the email. A final boundary denoting the email's final section must also end with two hyphens.

Attached files should be encoded with the **pack("m")** function to have base64 encoding before transmission.

Example:

Following is the example which will send a file **/tmp/test.txt** as an attachment. Try it once:

```
#!/usr/bin/python

import smtplib
import base64

filename = "/tmp/test.txt"

# Read a file and encode it into base64 format
fo = open(filename, "rb")
filecontent = fo.read()
encodedcontent = base64.b64encode(filecontent) # base64

sender = 'webmaster@tutorialpoint.com'
reciever = 'amrood.admin@gmail.com'

marker = "AUNIQUEMARKER"

body = """
This is a test email to send an attachement.
"""

# Define the main headers.
part1 = """From: From Person <me@fromdomain.net>
To: To Person <amrood.admin@gmail.com>
Subject: Sending Attachement
MIME-Version: 1.0
Content-Type: multipart/mixed; boundary=%s
--%s
""" % (marker, marker)

# Define the message action
part2 = """Content-Type: text/plain
Content-Transfer-Encoding:8bit

%s
--%s
""" % (body, marker)

# Define the attachment section
part3 = """Content-Type: multipart/mixed; name=\"%s\"
Content-Transfer-Encoding:base64
Content-Disposition: attachment; filename=%s

%s
--%s--
""" % (filename, filename, encodedcontent, marker)
message = part1 + part2 + part3

try:
    smtpObj = smtplib.SMTP('localhost')
    smtpObj.sendmail(sender, reciever, message)
    print "Successfully sent email"
except Exception:
    print "Error: unable to send email"
```